

WHAT IS CLAIMED IS:

1. A wide bandwidth discone antenna, comprising:  
  
a circular disc;  
  
a frusto conical cone in the form of a skeleton having conductive members extending from the apex of the cone in a conical configuration, said apex spaced from said disc; and.  
  
meander line stubs interposed in said conductive members, whereby the low frequency cutoff of said antenna is decreased over a similarly sized antenna without said stubs.
2. The antenna of Claim 1, and further including a peripheral conductive ring coupled to the distal ends of said conductive members, thus to eliminate ground effects when said antenna is deployed.
3. The antenna of Claim 1, and further including a coaxial cable feed for said antenna, said coaxial cable having a center conductor coupled to said circular disc and an outside conductor coupled to said cone at the apex thereof, said center conductor extending beyond said cone to said disc.
4. The antenna of Claim 1, and further including an additional antenna in spaced adjacency to said discone antenna, a coaxial cable connected to said additional antenna at one end thereof, said cone having an aperture, said coaxial cable running through said aperture, a ferrite toroid, said coaxial cable running through said aperture and looped

around said toroid, said disc having a disc aperture and said cable after having been looped through said toroid passing through the aperture in said disc, thereby to eliminate any detuning of said discone antenna associated with a coaxial cable feed passing through an aperture in said disc.

5. The antenna of Claim 1, and further including an inductor connected between said cone and said disc for decreasing the low frequency cutoff of said discone antenna.

6. The antenna of Claim 5, and further including a coaxial cable adapted to feed an additional antenna and passing through an aperture in said disc, said coaxial cable forming one or more turns of said inductor, whereby said inductor also functions to minimize detuning associated with the passage of said coaxial cable through an aperture in said disc.

7. The antenna of Claim 6, wherein said additional antenna is a discone antenna.

8. The antenna of Claim 1, and further including an inductor connected between said cone and said disc, and a number of coaxial cables, each adapted to feed a different additional antenna, said cables having their outer conductors fused together, said fused cables forming one or more turns of said inductor, with the outer conductors forming the turns of said inductor and the inner conductors feeding separate additional antennas.

9. The antenna of Claim 1 and further including a second discone antenna adjacent thereto, said disc serving as the disc for said second discone antenna.

10. The antenna of Claim 1, wherein said skeleton is collapsible.

11. The antenna of Claim 1, and further including an additional discone antenna, said discone antennas covering different frequency bands, the discone antenna having the lower frequency band having said skeleton cone with said stubs, whereby the size of said low frequency band antenna is minimized.

12. A method for reducing the low frequency cutoff of a discone antenna having a circular disc and a cone spaced therefrom, comprising the steps of:

forming the cone with a series of separate electrically conductive members extending from the apex of the cone; and,

interposing a meander line stub in an electrically conductive member, whereby the overall size of the cone can be minimized.

13. A method for eliminating detuning effects when feeding the antenna with a coaxial cable feed passed through an aperture in the disc of a discone antenna, comprising the step of:

winding the coaxial cable about a ferrite toroid prior to passing the coaxial cable through the aperture in the disc so as to produce an inductor, the outer conductor of said coaxial cable forming an inductor winding on the toroid.

14. A dual discone antenna comprising:
- a first discone antenna having a cone and a disc; and,
  - a second discone antenna in spaced adjacency to said first discone antenna and having a separate cone, said second discone using the disc associated with said first discone antenna as the disc therefor.
15. A multiplicity of discone antennas in stacked spaced adjacency, comprising:
- a bicone antenna having two opposed cones; and,
  - a discone antenna spaced from said bicone antenna, said discone antenna having a circular disc above its associated cone, said bicone antenna spaced from and above said disc.
16. A bicone antenna, comprising:
- a lower upwardly pointing cone;
  - an upper downwardly pointing cone, said lower cone having an aperture in the apex thereof; and,
  - a coaxial cable extending up through said lower cone at the apex thereof, the outer conductor of said coaxial cable coupled to said lower cone, and the central conductor of said coaxial cable coupled to said upper cone.

17. In a discone antenna having a skeleton cone including a number of separate conductive members extending from the apex of the cone, a method for eliminating ground effects that detune said antenna when said antenna is deployed adjacent the ground, comprising the step of:

providing a peripheral ring electrically attached to the distal ends of the conductive members so as to electrically interconnect the distal ends.